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UNIVERSITY OF TORONTO

Faculty of Dentistry

ANNUAL EXAMINATIONS

1969

HRD:3124
28.12.70

I Dental Year

BIOCHEMISTRY

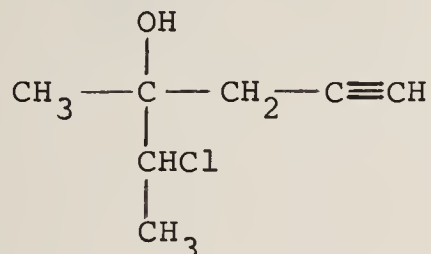
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January 18, 1969

(Total marks: 200)

Name: _____
(print)Marks:

25 1. Name the following compound:



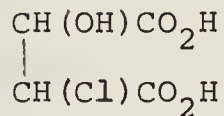
- (a) Write the structures of (i) a primary alcohol,
(ii) an acid chloride (i.e. an acyl chloride) and
(iii) an α, β unsaturated ketone which are structural isomers
of this compound.
- (b) 3-chloro-4-methylcyclohexanone is also an isomer of the above
compounds. Give its structural formula.

- 30 2. Draw a 3-dimensional formula of D (+) glyceraldehyde. Explain carefully the meaning of the chemical symbols D and (+). Draw its enantiomer and give its correct name.

Discuss the stereochemistry of the following compounds:



and



Name: 7

42

3. Write equations showing how the following transformations may be effected. Show all intermediate products, reagents and catalysts.

You may use any other organic or inorganic reagents you need.

(a) meta-chloronitrobenzene from benzene

(b) para-chloronitrobenzene from benzene

(c) 1-ethylcyclohexanol from cyclohexanol

3. (d) para-bromoacetanilide from benzene

(e) 1-phenyl-2-methyl-prop-1-ene from propene

(f) aspirin from phenol

Name: _____ //

35

4. (a) Write a general mechanism for the electrophilic substitution of benzene.

(i) Why is the reaction electrophilic in nature?

(ii) Why does substitution occur rather than addition?

(iii) Give any example of an electrophilic substitution reaction.

What is your electrophile and how is it formed in the reaction?

Name: _____ 3

4. (b) Write the equation for the formation of methyl benzoate from benzoic acid and methanol and then give a plausible mechanism for the reaction. Can you suggest an experiment which could be used to prove your mechanism in any way?

Name: _____ 15

30 5. Use equations, structural formulae or a sentence or two to illustrate or explain briefly ten of the following terms used in organic chemistry.

(a) structural isomers

(b) geometric isomers

(c) radical

(d) enantiomers

Name : 7

5. (e) diastereoisomers

(f) 1,2-and 1,4-addition

(g) S_N1 reaction

(h) S_N2 reaction

Name : 19

5. (i) resonance

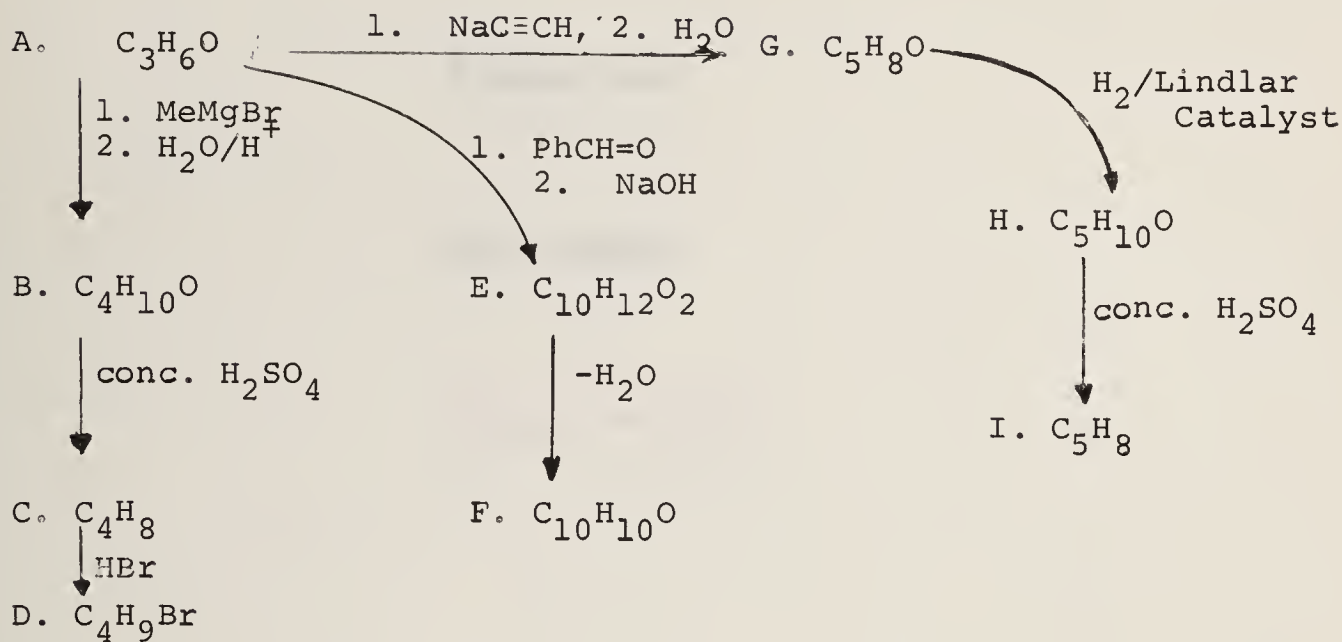
(j) tautomerism

(k) Markownikoff's rule

(l) electrophile and nucleophile

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6. A compound A (C_3H_6O) undergoes the following reactions:



FACTS

CONCLUSIONS

(i) A is not very readily oxidized.

(ii) A, E, and F react with

phenylhydrazine

(iii) B, E, G, and H react with

sodium to liberate hydrogen.

(a) List at the right the conclusion you can draw from each fact given on the left.

(b) Write down the structural formulae of the compounds A to I.

I Dental Year

GROSS ANATOMY

No paper available

UNIVERSITY OF TORONTO
FACULTY OF DENTISTRY

Annual Examinations, 1969

FIRST YEAR

HISTOLOGY

Please answer each section in a separate answer book.

SECTION A

It is recommended that five minutes be spent on each question.

25 marks per question.

Describe briefly with the aid of a diagram or diagrams, the following: -

1. The tooth germ at the bell stage of development.
2. The actively functioning cell associated with the formation of bone.
3. The actively functioning cell associated with the formation of
keratin.
4. The named groups of fibres in the periodontal ligament.

SECTION B

It is recommended that five minutes be spent on each question.

5 marks per question.

Write brief notes on the following: -

5. Epithelial cell rests of Malassez
6. Hunter Schreger bands
7. Golgi apparatus
8. Autoradiograph
9. Elastic fibres
10. Mast cell
11. Erythrocyte
12. Osteoclast
13. Sarcolemma
14. Lymphoblast
15. Cardiac muscle
16. Microvilli
17. Tight junction
18. Cristae mitochondriales
19. Fibro-cartilage
20. Nissl substance

21. Schwann cell
22. Alkaline phosphatase
23. Lyosomes
24. Woven bone

SECTION C

It is recommended that 60 minutes be spent on this section. Total marks available 100.

Answer, in the form of a critical essay, one of the following: -

1. Give an account of collagen structure and show how this material is of importance in tooth development, structure and function.
2. Describe some of the newer methods by which enamel has been studied in the last decade and explain how these methods have altered our ideas of enamel formation and structure.
3. Give a critical account of the various theories of tooth eruption.

UNIVERSITY OF TORONTO
FACULTY OF DENTISTRY

Annual Examinations, 1969

FIRST YEAR

ORAL ANATOMY

MINUTES MARKS

A boy 8 years of age comes into your office.

15 10 1. He possesses an orthognathic facial type. How would you identify this facial pattern? How would you differentiate it from other facial patterns within the classification of the craniofacial skeleton?

8 5 2. What type of mixed dentition would you expect to observe within the oral cavity? How would you differentiate it from other categories within the dental classification of the mixed dentition?

23 15 3. Draw the facial view of the permanent dentition relationship that you would expect this individual to develop into. How would you differentiate it from other relationships that exist within the classification of the permanent dentition?

8 5 4. When you view the patient from the front you observe a dolicocephalic appearance of the craniofacial skeleton. Describe this pattern. Differentiate it from other craniofacial patterns.

8 5 5. With a dolicocephalic craniofacial skeletal pattern, what relationship would you expect to observe between -

- (i) the maxillary and mandibular posterior teeth
- (ii) the maxillary and mandibular alveolar processes
- (iii) the maxilla and mandible
- (iv) the alveolar processes and the basic jaw pattern

23 15 6. (i) What teeth would you expect to observe in the oral cavity?

(ii) What additional teeth would you expect to observe in a complete series of periapical dental radiograms?

(iii) What teeth are in the process of emerging?

(iv) What teeth are in the process of beginning calcification?

(v) What teeth are in the process of crown completion?

(vi) What teeth have attained approximately 3/4 of the length of the root?

23 15 7. Draw the occlusal view of the dentition in the mandibular right quadrant and differentiate between primary and permanent teeth.

MINUTES MARKS

- | | | | |
|--|----|-----|---|
| 8 | 5 | 8. | If the boy was fortunate enough to have had spacing within his primary dentition what adjustment would you expect to have happened in the $\frac{6}{6}$ area, and when? |
| 8 | 5 | 9. | If you ask the patient to move his mandible into the right lateral position, what $\frac{6}{6}$ dental relationship would you expect to observe in the coronal plane. |
| 8 | 5 | 10. | Upon examination of the periapical dental radiograms you observe two posterior teeth joined together by cementum. What is this condition and how do you differentiate it from two other related anomalies of dental morphology? |
|
<u>Please answer Questions 11 and 12 in a separate book.</u> | | | |
| 8 | 5 | 11. | Give the term or phrase that succinctly describes the following:

(i) A ridged herbivorous cheek tooth
(ii) Continuous replacement of teeth throughout the life of the animal
(iii) The major cusp on the talon
(iv) The diet of a bunodont crushing dentition
(v) Specialised shearing teeth |
| 15 | 10 | 12. | Briefly discuss the factors that made it possible for a quadrupedal arboreal primate to evolve into a bipedal terrestrial preman. |

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UNIVERSITY OF TORONTO
FACULTY OF DENTISTRY

Annual Examinations, 1969

SECOND YEAR

BACTERIOLOGY

MARKS

- 10 1. Answer two of the following:
- (a) What is the composition and functions of the bacterial plasmic membrane?
 - (b) What is the composition and functions of the covering layers of viruses?
 - (c) What are the mechanisms which regulate the function and synthesis of enzymes in bacterial cells?
 - (d) What are the mechanisms involved in acid production by bacteria?
- 10 2. Answer (a) or (b)
- (a) What are the antigen-antibody reactions in Vitro, and what are their practical uses?
 - (b) Discuss the actions of bacterial endotoxins and bacterial cytotoxins.
- 15 3. What are the mechanisms involved in the immediate type of clinical allergies? Include in your answer the structural parts of globulin involved. What methods are available to prevent and treat these allergies?
- 15 4. Answer (a) or (b)
- (a) What is the pathogenesis of tuberculosis? What therapeutic and preventive measures have caused the incidence to drop in the last decade?
 - (b) What is the relationship of the life cycles of the malaria parasite and the pathogenesis and spread of malaria? What therapeutic and preventive measures are available?
- 10 5. Discuss the pathogenesis and clinical symptoms of salmonella infections. List the procedures to confirm the causative agents in the laboratory. What are the treatments?
- 10 6. Answer (a) or (b)
- (a) Discuss the pathogenesis and epidemiology of picorna viruses.
 - (b) Discuss the pathogenesis and epidemiology of pox producing viruses.

MARKS

- 15 7. Discuss the clinical symptoms, diagnosis and treatment of any two of the following:
- (a) Actinomycocis
 - (b) Candida infections
 - (c) Gas gangrene
 - (d) Diphtheria
 - (e) Post-streptococcal diseases
 - (f) Viral hepatitis
- 15 8. Write a short note on any three of the following:
- (a) Contact dermatitis
 - (b) Passive cutaneous anaphylaxis
 - (c) Lactobacillus and actinobacillus bifidus
 - (d) Staphylococcal food poisoning
 - (e) Scarlet fever
 - (f) Wasserman test
 - (g) Biochemical background of Blood groups A, B, O and Lewis
 - (h) Serum sickness
 - (i) Leprosy

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II Dental Year

GENERAL PATHOLOGY

Not available

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II Dental Year

PHYSIOLOGY

Not available

UNIVERSITY OF TORONTO
FACULTY OF DENTISTRY

Annual Examinations, 1969

THIRD YEAR

ANAESTHESIA

MARKS

- 20 1. Utilizing a diagram only trace the origin, course and distribution of the 5th cranial nerve.
- 20 2. a) Outline in point form the technique for a mandibular block injection.
- b) Discuss the three main causes of failure to procure adequate anaesthesia following a mandibular block injection.
- c) Draw a cross section of the retromolar triangle area showing structures involved in a mandibular block technique.
- 20 3. List in sequence the steps to be taken in the treatment of a haemotoma which has resulted from a local anaesthetic injection.

Please answer question 4 in a separate book.

- 20 4. Discuss the application of general anaesthesia in dentistry.

Please answer Question 5 in a separate book.

- 20 5. a) Discuss in general terms the mechanisms involved in the cardiovascular collapse as seen in shock.
- b) How could the effects of general anaesthesia and surgery produce shock in a dental patient.

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FACULTY OF DENTISTRY

Annual Examinations, 1969

THIRD YEAR

GENERAL SURGERY

MARKS

- | | |
|----|--|
| 15 | 1. Describe the local and systemic features of a severe streptococcal infection of the arm. |
| 15 | 2. Describe the clinical features that would be present in a patient with a massive haemorrhage. |
| 5 | 3. Enumerate the local causes of delayed healing in a surgical wound. |
| 10 | 4. Enumerate the lateral swellings that may occur in the neck. |
| 15 | 5. Describe -

(a) The local clinical characteristics of a palpable malignant tumour.

(b) Briefly indicate the methods that are available for treatment of malignant disease. |

ORAL SURGERY

- | | |
|----|---|
| 10 | 1. Discuss the reasons why penicillin is the antibiotic of choice in oral infections. What advantageous features have the recently developed synthetic penicillins? |
| 20 | 2. What oral surgery procedure would your treatment plan include for the following: -

a) patient on prolonged use of Cortisone

b) hypertensive patient

c) patient with acutely abscessed tooth

d) coronary diseased patient on Dicoumoral

e) pregnancy |
| 10 | 3. What are the principles of flap design? How would you proceed to remove a broken down maxillary 1st bicuspid and maxillary 2nd molar? |

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THIRD YEAR

NUTRITION

MARKS

- 5 1. Compare the more important nutrients in the following: -
 (answer each section very briefly).
- (1) Skim and whole milk.
 - (2) Oranges and apples.
 - (3) Rolled oats and cornflakes.
 - (4) Carrots and cauliflower.
 - (5) Sweet potatoes and white potatoes.
 - (6) Butter and margarine.
 - (7) Cheddar cheese and cottage cheese.
 - (8) Orange juice and pineapple juice.
 - (9) Apple juice (vitaminized) and grapefruit juice.
 - (10) Apples and vitaminized apple juice.
- 12 2. Make detailed dietary recommendations for the following giving
 reasons for each recommendation made: -
- (a) A boy 13 years of age - 10 lbs. overweight -
 rampant caries. According to his recorded
 diet, it is extremely deficient nutritionally,
 due partly to a very restricted food budget.
 - (b) An adult male - 10 lbs. underweight - little
 caries - but eating a very poor diet from
 choice, not necessity.

III Dental Year

ORAL PATHOLOGY

Not available

III Dental Year

PERIODONTICS

Not available

III Dental Year

PHARMACOLOGY

Not available

III Dental Year

PREVENTIVE DENTISTRY

Not available

UNIVERSITY OF TORONTO
FACULTY OF DENTISTRY

Annual Examinations, 1969

FOURTH YEAR

DENTAL PUBLIC HEALTH

MARKS

- 9 1. Social scientists have made certain suggestions about motivating people to take health action. Answer either one of the following:
- i) Outline and discuss briefly three basic, general conditions under which people take action to preserve or regain health.
- or
- ii) Outline and discuss briefly the specific, crucial factors which must be weighed by the individual before voluntary health action takes place.
- 9 2. Discuss dental prepayment plans under the following headings:
- i) problems re premiums
 - ii) plan restrictions
 - iii) administrative mechanisms
- 17 3. The demand for dental care is likely to increase enormously if dental care is included in the federal-provincial "medicare" programme. Since the present numbers of dentists and auxiliaries can do no more than cope with present demands for service, suggest programmes for:
- (1) training sufficient numbers of dental personnel of all kinds.
 - (2) preventing dental disease.
 - (3) modifying the present system of delivery of dental health care so that the expected new demand for service can be met.

PRACTICE ADMINISTRATION

- 15 1. The schedule of fees approved by the Ontario Dental Association for dental services provided by the general practitioner is structured, upon a "relative value system".
- (a) What is meant by the term "relative unit value" and on what bases is it formulated?
 - (b) List the components which are considered in establishing the "dollar conversion factor"?
 - (c) Under what circumstances could injudicious use of this fee schedule result in overcharging the patient?
- 5 2. What ethical means can be employed in making known the opening of a dental practice?
- 10 3. Good practice administration requires: -(a) office stationery
(b) Patient records
(c) accounting records
- List the items in each category, normally required.

ENDODONTICS

MARKS

- 15 1. A patient presents with a lower first permanent molar for which endodontic treatment is planned.
- (a) Describe the procedure which you would follow to gain access to the root canals prior to instrumentation by reamers or files.
- (b) In this case the roots are curved. Describe the technic which you would follow to ensure that the silver points are cemented to a correct relationship with the respective apices.
- (c) Discuss briefly the respective advantages and disadvantages of gutta percha and (or) silver points as a medium for the obliteration of root canals in molar teeth.
- 15 2. A child of 12 years of age presents with a diagonal fracture of the crown of a maxillary central incisor. There is extensive loss of dentine but no exposure of the dental pulp.
- (a) Describe the technic which you would follow to give the pulp maximum opportunity to retain its vitality.
- (b) In this case the child is covered by school insurance for a period of three years. How would you word your report to the company concerning the prognosis so that the patient would receive maximum financial protection?
- 5 3. Describe briefly the precautions which you would take while obliterating a root canal in a tooth with an incompletely formed root in a maxillary central incisor by lateral condensation of gutta percha.

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FOURTH YEAR

DENTAL RADIOLOGY

MARKS

1. a) Describe the technique for taking a periapical radiograph of the lower anterior teeth.

16 b) Describe the procedure for taking the same area using an occlusal film.

c) In the resultant radiographs what are the similarities and differences in these two views?

21 2. With this examination paper there are six prints of radiographs. Write a complete report of each case.

The six prints must be handed in with your answer book.

13 3. a) Describe changes in the pulp chamber and root canal which may be visible radiographically.

b) Discuss the information concerning the roots of teeth which can be obtained from dental radiographs.

ORAL SURGERY AND ANAESTHESIA

10 1. In the removal of five teeth in the left maxillary quadrant in a 60 year old male three teeth, namely, first bicuspid, first and second molars have fractured at the neck. Describe and illustrate with diagrams how you would complete the surgery in that quadrant.

5 2. a) Describe your surgical and chemotherapeutic management of an aching maxillary 1st bicuspid with facial oedema on a 25 year old healthy male patient.

5 b) List conditions which may be improved with surgery prior to construction of prosthesis.

20 3. Write brief notes on the following:

simple bone cavity
ameloblastoma
sialolith
oro-antral fistula
apertognathia

tempero-maxillary joint pain syndrome
ankyloglossia
erythromycin
"dry socket"
ostium maxillare

Please answer Question 4 in a separate book.

10 4. Discuss the application of sedation in dentistry under the following headings:

- a) Rationale
- b) Drugs employed
- c) Techniques



FOURTH YEAR

ORAL DIAGNOSIS

MARKS

- 15 1. Describe three vesiculo-bullous disorders of the oral mucous membrane.
- 20 2. A young adult presents with tender enlargement of the gingiva of recent development.
- 20 a) Enumerate features of the history and examination which might lead you to consider a diagnosis of leukaemia.
- 15 b) Write a letter referring the patient to his physician for further investigation.
- 15 3. a) Discuss the relative values of methods of detecting early dental caries of occlusal fissures and interproximal surfaces respectively.
- b) Discuss the value of percussion of teeth as a diagnostic aid.

MEDICINE

Answer any FIVE of the following questions.

- 5 1. (a) List the four major functions of the liver.
- 5 (b) Describe briefly the two dangers facing an individual with advanced alcoholic cirrhosis of the liver.
- 10 2. Write a short note on the pathogenesis of pulmonary tuberculosis.
- 10 3. Discuss the treatment of severe diabetes mellitus in a twelve year old child, giving reasons for the treatment outlined.
- 3 4. (a) What is angina pectoris and to what is it attributed?
- 7 (b) What is myocardial infarction? List five complications of myocardial infarction.
- 10 5. Describe briefly the biochemical abnormalities and their significance in CHRONIC RENAL FAILURE under the following headings:
- 1) BUN
- 2) Na and K
- 3) Acid Base balance
- 10 6. Write a short note on each of the following "laboratory tests in the investigation of anaemia" :
- 1) Reticulocyte count
- 2) Schilling Test (for pernicious anaemia)
- 3) Coomb's Test - direct and indirect

IV Dental Year

ORTHODONTICS

Not available

IV Year Dentistry

PAEDODONTICS

No paper available

RESTORATIVE DENTISTRY

MARKS

- 20 1. Pulpal injury by means of carious involvement is sometimes referred to as a reversible or irreversible condition. A patient presenting with pulpitis usually exhibits certain clinical diagnostic signs distinguishing one from the other.
- 5 (a) List the symptoms for each condition.
- 5 (b) Outline a suitable treatment for each condition.
- 5 2. What factors would influence you in the selection of gold foil as a filling material?
- 5 3. Enumerate at least five requirements of an ideal cavity liner.
- 5 4. Name three different methods of retracting gingival tissue preparatory to taking a hydrocolloid impression.

Please answer only two of Questions 5, 6 and 7. Use a separate book.

- 17½ 5. Even though the utmost care is taken in the fabrication of complete dentures, there may be unforeseen problems that arise when the patient is attempting to adjust to the new prosthesis. These problems may be classified under four major headings:

- i) comfort
- ii) function
- iii) esthetics
- iv) phonetics

Discuss complete denture problems under the four headings mentioned above.

- 17½ 6. How do the pertinent anatomy and physiology relate to the making of an impression for a completely edentulous patient.
- 17½ 7. What are the intra and extra oral manifestations in an edentulous patient -
 - i) when the vertical dimension has been increased too far?
 - ii) when the vertical dimension has been closed too far?

Please answer Questions 8, 9 and 10 in a separate book.

8. Describe, using drawings:
- 10 (a) Classification of "pockets" associated with periodontal disease.
- 10 (b) Principles employed in the reduction of depth of these pockets.
- 5 9. Describe, using drawings, factors which relate to abnormal mobility of teeth.
- 5 10. Write a short note on bacterial plaque and its significance to periodontal disease.

UNIVERSITY OF TORONTO
FACULTY OF DENTISTRY

Annual Examinations, 1969

FIRST YEAR DENTAL HYGIENE

BACTERIOLOGY

MARKS

15. 1. Discuss any two of the following using appropriate examples in each case.
- a) Virulence
 - b) Differences in the zones of precipitation when antibody is mixed with antigens of increasing concentration.
 - c) Purification of antigens and antibodies before their use for diagnosis of a disease in the laboratory.
 - d) Lancefield classification of streptococci.
- 10 2. Answer two of the following:
- a) What are the composition and functions of the bacterial protoplasmic membrane?
 - b) What are the mechanisms which regulate the functions and synthesis of enzymes in bacterial cells?
 - c) What are the natural factors of host resistance and what is their action?
- 10 3. Answer two of the following:
- a) What are the general actions of bacterial endotoxins?
 - b) What are the general actions of bacterial cytotoxins?
 - c) Describe the action of two bacterial exotoxins.
- 10 4. Answer (a) or (b).
- (a) What is the structure and composition of the different classes of antibody molecules? Indicate where antigen is bound and where the molecule may be cytotoxic.
- OR
- 10 5. (b) What are the mechanisms involved in (1) anaphylaxis and (2) serum sickness. Include in your answer the chemical substances which are formed in the tissues and their actions.
- 10 5. Discuss the importance of the Rhesus blood factor in blood transfusions and pregnancies. What tests and preventive measures are available?
- 10 6. Answer (a) or (b)
- (a) What is the cause of rheumatic fever and what can be the result in later life?
- OR
- (b) Discuss the pathogenesis of acute infections caused by haemolytic streptococci. Describe some of the clinical lesions. What mechanisms are involved in their healing?

MARKS

- 15 7. How does penicillin act on bacteria? What factors influence the dose and length of time of administration? What chemical forms of penicillin are to be used for: oral administration, injection administration, different types of bacteria, and when dealing with resistant bacteria?
- 20 8. Write a short note on any four of the following:
- a) Food poisoning
 - b) Staphylococcal lymph adenitis
 - c) Possible pathogenicity of enterococci
 - d) Hay fever and its prevention
 - e) Tetracyclines
 - f) Chemical background of the blood groups, A. B. O.

Examiners: S.L. Joliat
M.L. Wellman

UNIVERSITY OF TORONTO
FACULTY OF DENTISTRY

Annual Examinations, 1969

FIRST YEAR DENTAL HYGIENE

Biological Chemistry and Human Nutrition 100

All questions are of equal value.

Five (5) questions constitute a complete paper.

Questions 1 - 3 are compulsory.

1. Explain five of the following terms and write a brief note on their biological significance. Use specific illustrations in your answer.

(a) bile salts	(e) fluoridation
(b) buffer	(f) niacin-equivalent
(c) codon	(g) oxidative-phosphorylation
(e) essential fatty acid	(h) Stereoisomerism of carbohydrates
2. The Kreb's Citric Acid Cycle is the hub of energy metabolism in the cell. Discuss this statement in detail and indicate where the products of metabolism are found to occur.

(formulae are not required)

3. Many nutrients are closely interrelated with each other, either functioning as part of the makeup of the same tissue, or together in body metabolism. Explain fully the interrelationships existing within any two of the following groups:

(a) Calcium, phosphorous and vitamin D
(b) B-complex vitamins and carbohydrate metabolism
(c) Iron, calcium, protein and vitamin K

Choose two of the following four.

4. Mulder believed that proteins were "unquestionably the most important of all known substances in the organic kingdom". Discuss the importance of protein under the following headings:

(a) Function in body metabolism
(b) Requirements and sources of protein
(c) Genetic control of protein synthesis and inborn errors of metabolism.

ContinuedS

ContinuedS

5. For each of the clinical signs listed below, suggest a possible nutritional cause (or causes), the treatment you would recommend and any counselling you would give should you encounter these symptoms in clinical situations.

- (a) Gingival swelling and bleeding
- (b) Dermatitis and tongue lesions
- (c) Mottled enamel
- (d) Excess caries in children

6. Choose one of the following stages of the life cycle and discuss fully the importance of adequate nutrition during this stage.

Infancy or pregnancy or old age.

Include in your answer a discussion of -

- (a) nutrient needs and factors influencing and altering these needs
- (b) role of nutritional supplements

7. Each cell in the body contains a large number of enzymes. Discuss the purpose, action and factors affecting the velocity of the reactions in which enzymes are involved.

UNIVERSITY OF TORONTO
FACULTY OF DENTISTRY

Annual Examinations, 1969

FIRST YEAR DENTAL HYGIENE

ENGLISH

Answer FOUR questions, one from each section and the fourth from any section.
Do not write on the same text twice.

A

1. "Holden Caulfield never grows up." How adequate is this assessment of him?
2. Discuss some of Fielding's satirical techniques in Tom Jones.
3. Consider the effectiveness of Nelly Dean as a narrator in Wuthering Heights.
4. Compare the influence of Alec and Angel on Tess.
5. Compare the presentation of Stephen Dedalus and Holden Caulfield.

B

6. How far is Oedipus's tragedy due to internal as well as to external forces?
7. To what extent is love seen as exalting or degrading in Antony and Cleopatra?
8. Discuss the influence of the past in The Wild Duck.
9. Examine the theme of self-deception in A Streetcar Named Desire.
10. "The battle of the sexes." Does anyone emerge victorious in Who's Afraid of Virginia Woolf?

C

11. Discuss the treatment of ONE of the following themes in the work of any TWO poets on the course: nature and art, tradition and the past, love, youth, death.
12. Discuss the use of the first person in the work of any TWO of these poets.
13. Write a critical analysis of the following poem by Robert Frost.

"Fire and Ice"

Some say the world will end in fire,
Some say in ice.
From what I've tasted of desire
I hold with those who favor fire.
But if it had to perish twice,
I think I know enough of hate
To say that for destruction ice
Is also great
And would suffice.

UNIVERSITY OF TORONTO
Faculty of Dentistry

Annual Examinations, 1969

FIRST YEAR DENTAL HYGIENE

GROSS ANATOMY

MARKS

- 16 1. Describe the muscles of mastication - include origin, insertion, nerve supply, blood supply and function.
- 14 2. Describe briefly -
- (a) the innervation of the tongue
 - (b) the muscles of the tongue
 - (c) the mucosa of the tongue
- 20 3. Discuss briefly only four (4) of the following:
- (a) Sternum
 - (b) Diaphragm
 - (c) Right auricle (Atrium)
 - (d) Gall Bladder
 - (e) Parotid Gland
 - (f) Skeletal Structure of Upper Limb (Arm)

UNIVERSITY OF TORONTO
FACULTY OF DENTISTRY

Annual Examinations, 1969

FIRST YEAR DENTAL HYGIENE

HISTOLOGY

MARKS

- | | |
|----|---|
| 20 | 1. By means of fully labelled drawings <u>only</u> , indicate the microscopic anatomy of the periodontal ligament. |
| 25 | 2. Discuss dentinogenesis. Illustrate your answer with fully labelled diagrams. |
| 15 | 3. With the aid of a fully labelled drawing, describe the microscopic anatomy of the "tooth germ" in the developing jaw, just prior to the onset of dentin formation. |
| 40 | 4. Write short notes on <u>five</u> of the following. Illustrate your answers.

a) the ultrastructure of a fully differentiated secreting ameloblast.

b) the ultrastructure of an ameloblast in the post secretion stage.

c) mucosa lining anterolateral aspect of the hard palate.

d) vallate papilla

e) functional complexes,

f) lysosomes |

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I Dental Hygiene

ORAL ANATOMY

Not available

I Dental Hygiene

PSYCHOLOGY

Not available

UNIVERSITY OF TORONTO
FACULTY OF DENTISTRY

Annual Examinations, 1969

SECOND YEAR DENTAL HYGIENE

DENTAL PUBLIC HEALTH

MARKS

- 15 1. i) Define epidemiology and describe two basic types of epidemiology.
- ii) Describe in point form the epidemiological studies which led to the discovery of the relationship between water fluoridation and dental caries.
- iii) Briefly discuss one of the following:
- a) Mottled teeth and fluorides
- OR
- b) Referenda on fluoridation
- 5 2. Outline in a general way how the official and unofficial agencies concerned with dental health are organized in Canada.
- 5 3. Describe the W.H.O. simplified survey method under these two headings:
- i) Purpose
- ii) Severity levels

PAEDODONTICS

B

- 15 1. An apprehensive but co-operative four year old boy is presented to you for his first dental radiographic examination. Briefly describe the following aspects of the radiographic procedures.
- a) The methods you would use to enlist his complete co-operation.
 - b) The procedure you would follow to prevent the films from becoming excessively contaminated with saliva during exposure.
 - c) The technique you would use to prevent genetic damage from radiation.
 - d) The number, type and speed of films you would use for an adequate survey of this child.
 - e) The exact procedure you would use in radiographing the anterior region of the maxilla.
- 10 2. List in point form your answers to the following questions.
- a) Classify the relationships of the deciduous or primary molar teeth.
 - b) Name the area of the mouth where ectopic eruption is most likely to occur.
 - c) Name, in order of frequency, the teeth most commonly missing in the young permanent dentition.
 - d) What dental defect in the permanent dentition can be caused by a prolonged illness in a very young child.

MARKS PAEDODONTICS Cont'd.

- e) What is the most likely reason for one upper central incisor being missing from the maxillary arch of an eight year old boy?
- f) What is the dental anomaly which is associated with extremely rapid wear of the teeth to the gum level?

CLINICAL NUTRITION

- 10 1. Compare two methods of dietary control of dental caries presently in use.
- 15 2. Write out recommendations and a menu for two days for each of the following: -
- (a) A child 9 years of age - average weight and with a moderate amount of dental caries - family on limited food budget.
- (b) A girl 15 years of age - 10 lbs. overweight with rampant caries - who is consuming a "typical teen age diet" - cost not an important factor in this case.
- (c) A woman - 35 years of age - 15 lbs. underweight - little caries but gingival tissues in unhealthy condition. Presently eating a very poor diet from choice, not necessity.

In each case give reasons for recommendations made.

SECOND YEAR DENTAL HYGIENE

ORTHODONTICS

MARKS

- 20 1. A complete and thorough examination of a patient is required to make an accurate orthodontic diagnosis.
- a) List what would be included in the complete orthodontic records.
- b) Briefly show the purpose of each in establishing the diagnosis.
- 10 2. Fixed Multi-Band appliances have just been placed for a new orthodontic patient. Outline briefly what instructions you, as a hygienist, would give the patient.

PHARMACOLOGY

- 6 1. For what purposes are the following used in dentistry?
One example for each.
- a) Corticosteroids
- b) Antihistamines
- c) Oxidized cellulose
- 6 2. a) Name one barbiturate, and one other alternative sedative.
- b) Name two analgesics, one for moderate, one for severe pain.
- c) Name two antibiotics used in dentistry, as alternatives to penicillin.
- 6 3. Give one effect for each drug which may be observed in the mouths of patients taking:
- a) Banthine
- b) Dilantin
- c) Mercurial diuretics
- 6 4. Very briefly: what is the purpose of epinephrine in?
- a) Local anaesthetic solutions
- b) Gingival packing cord
- c) Emergency kits
- 6 5) Give one example for each of the following:
- a) Cerebral stimulant
- b) Caustic
- c) Desensitizing agent

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SECOND YEAR DENTAL HYGIENE

PATHOLOGY

MARKS

- | | |
|----|---|
| 15 | 1. Explain thrombus formation in circulating blood. |
| 10 | 2. Compare carcinoma-in-situ and squamous cell carcinoma. |
| 10 | 3. Describe chronic hyperplastic pulpitis. |
| 15 | 4. Describe ameloblastoma. |

PERIODONTICS

- | | |
|---|--|
| 1. Describe periodontal (lateral) abcess under the headings: | |
| 5 | Etiology |
| 10 | Signs and Symptoms |
| 5 | Treatment |
| 2. To what classifications of periodontal pockets are the following principles applied? | |
| 2 | Reduction of swelling |
| 2 | Induction of new attachment |
| 3 | Production of recession |
| 14 | 3. Describe, using drawings, direct local causes of recession of the gingival tissues. |
| 9 | 4. Name causes of enlargement of the gingival tissues. |

II Dental HygienePHYSIOLOGY

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II Dental HygienePREVENTIVE DENTISTRY

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II Dental HygieneRADIOGRAPHY

Not available

II Dental Hygiene

SOCIOLOGY

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